



## Glossary of Terms

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**Acquisition** – This type of project includes the acquisition of land, structures, and buildings. These are fixed assets that have no relationship to the addition or improvement to, or the repair or replacement of, existing fixed assets. An example of an acquisition would be purchase of a tract of land or purchase of a building.

**Addendum** – A written or graphic instrument issued by the architect before execution of the construction contract that modifies or interprets the bidding documents by additions, deletions, clarifications, or corrections.

**Addition** – An addition expands or extends an existing fixed asset. An example of an addition would be the construction of a new wing for a correctional institution. New construction attached to an existing structure as an extension is an addition. Generally, additions involve alterations within existing buildings to make connections.

**Additional Services** – Professional services that may, if authorized or confirmed in writing by the agency or institution, be rendered by the architect or other consultants in addition to the basic services identified in the owner-architect agreement. (See Form C100, Sections B3 and B4.)

**Additive Alternate Bid** – An amount stated in the bid to be added to the amount of the base bid if the corresponding change in work, as described in the bidding documents, is accepted.

**Alternate Financing** – Proposals that cover a wide range of financial contracts that call for the development or use of space by state agencies through a contractual arrangement with a developer or financing entity. Financing may involve the sale of debt obligations (Certificates of Participation (COPs) through the State Treasurer) or funding from a private developer. Title to the property involved may transfer to the state either upon exercise of an option, or at the termination of the contract.

**Alternative Analysis** – Involves identifying different ways of meeting the functional requirements of the program including various construction solutions to a problem or whether to lease, buy, build, or use some other financing techniques. This requires using approaches such as cost-benefit or life-cycle costing analysis to determine comparable costs of alternatives.

**Alternative Public Works** – Refers to public works processes authorized under RCW 39.10 and includes General Contractor / Construction Manager (GC/CM) and Design-Build. In order to use these procedures, the project must meet the criteria (including project size) stipulated in RCW 39.10.

**Architect/Engineer (A/E)** – A party to a contract to provide professional architectural or engineering design services to an agency or institution.

**Artwork Allowance** – The cost of artwork for original construction of any building excluding storage sheds, warehouses, or buildings of a temporary nature, as provided in RCW 43.17.200. All universities and colleges shall compute artwork allowances on the cost of original construction, and on the cost of major renovation or remodeling work exceeding \$200,000, as provided in RCW 28B.10.027. Agencies should compute artwork allowances for original

construction on the basis of one-half of 1 percent of the sum of consultant services, maximum allowable construction cost, and equipment costs on Form C100, Section E.

**Associated (Annual) Cost** – These costs should include any ongoing expenses not included in Maintenance and Operations. These expenses should include all new program and staff costs reasonably assigned to the program housed in the facility. The method of calculation using escalation and discount rates is the same as Maintenance and Operations. Agencies should indicate the base annual associated costs.

**Base Bid** – An offer to do construction work for payment, the acceptance of which constitutes a contract between the contractor who made the bid (the bidder) and the agency or institution who accepted it exclusive of adjustments for additive alternates. Also known as a proposal or a tender; often called a prime bid when made by a construction company that hopes to become the prime contractor, or a sub-bid when made by a company that hopes to become a subcontractor.

**Basic Design Services** – Architectural/Engineering (A/E) Basic Design Services consist of those services described in the Guidelines for Determining Architect/Engineer Fees for Public Works Building Projects in Washington State. These design services include normal architectural, structural, mechanical, electrical, and civil engineering services for the project. (See Form C100, Section B2.)

**Bond** – An obligation by which one party (surety) agrees to guarantee performance by another of a specified obligation for the benefit of a third person or entity (obligee). Examples include bid bond, performance & payment bond. (See Form C100, Section F.)

**Building Renewal** – Improvements to facilities (less than \$1 million), usually to the building envelope or within the building footprint, to prevent deterioration and maintain use of the facility.

**Change Order** – A written authorization provided to a contractor approving a change from the original plans, specifications, or other contract documents, as well as a change in the cost. With the proper signatures, a change order is considered a legal document.

**Claims Review Board** – A method of resolving disputes other than by arbitration or litigation.

**Clerk of the Works** – An outdated term for a representative of the architect or owner who oversees construction, handles administrative matters, and ensures that construction is in accordance with the contract documents. Currently referred to an owner's on-site representative.

**Commencement Date of Construction** – The start of the construction period which is generally characterized by the mobilization of construction forces on the project site.

**Commissioning and Training** – The process for achieving, verifying, and documenting that the performance of a building and its various systems meet design intent together with the operational needs of the owner and occupants. The process extends through all phases of a project, from initial concept to occupancy and operation, and includes the training of maintenance personnel.

**Constructability Review** – The cost for an independent consultant or contractor to determine if a unique or unusual project can physically be built as designed. This is to reduce construction change orders and claims. This review should be conducted at 75 percent completion of the construction documents.

**Construction Document Phase** – The phase of services in which the architect prepares the construction documents from the approved design development documents and assists the agency/institution in preparation of the bidding documents.

**Construction Management (CM)** – Involves a contractual arrangement in which an owner employs an agent-consultant called a Construction Manager to coordinate and manage all of the construction trades. The additional management expertise is usually used on larger, more complex construction projects. However, an owner on a smaller project may acquire a construction manager for their construction expertise to act as the “eyes and ears” for the owner on the project.

**Consultant** – A person or entity who provides advice or services to an agency or institution.

**Consultant Selection Cost** – The cost of advertising and travel for public members of a selection board, if required by RCW 39.80.

**Contingency** – The need for cost contingency is generated by a lack of information, at a particular point in time, for the task being estimated. Appropriate contingency amounts are dependent on the degree of risk present and the extent of the technical challenge surrounding the task. The design contingency legitimately covers uncertainties in a project and should be reduced through each phase of the design. Construction contingencies should be limited to 5 percent on new construction and 10 percent on remodeling work. Contingencies should not be considered as opportunities for extra work or to change original budget decisions.

**Contract Documents** – The drawings, specifications, conditions, agreement, and other documents prepared by the designer that illustrate and describe the work of the construction contract and the terms and conditions under which it shall be done and paid.

**Contractor** – A person, firm or corporation who or which, in the pursuit of an independent business undertakes to, or offers to undertake, or submits a bid to, construct, alter, repair, add to, subtract from, improve, move, or demolish, for another, any building, excavation or other structure, project, development, or improvement attached to real estate or to do any part thereof.

**Corrective Maintenance** – Unscheduled “call-in” requests for repair or replacement of equipment, systems, or facilities that have failed.

**Cost/Benefit Analysis** – An analysis in which consequences of the investment are measured in or converted to economic terms and qualitative benefits.

**Cost Estimating** – An element of basic services in an A/E agreement that includes an estimate of construction cost from quantity surveys and unit costs of building elements for the project. Costs shall reflect the level of design elements presented in the design documents, plus appropriate construction estimating contingencies to encompass unidentified scope ultimately included in the program. Interactive Cost Estimating is additional work beyond basic services in which additional design alternatives are estimated. Independent Cost Estimating, if needed, covers cost estimates by an independent third party contracted to the owner and used to validate cost estimates prepared by the A/E.

**Deferred Maintenance** – Ordinary maintenance activities left unperformed due to a lack of resources or perceived low priority, where deferral of the maintenance activity results in a progressive deterioration in facility conditions or performances. The cost of the deterioration,

including capital costs, operating costs, and productivity losses, is expected to increase if the maintenance activity continues to be deferred.

**Design Build** – A method of project delivery subject to provisions in RCW 39.10 in which the agency/institution contracts directly with a single entity that is responsible for both design and construction services for a construction project.

**Design/Code Plan Check (ICBO)** – The cost for design document plan check that is performed by the International Conference of Building Officials (ICBO) only when required by local code officials. This requirement should be identified in the permit review process.

**Design Development Phase** – The phase of the A/E's services in which the consultant prepares the design development documents, from the approved schematic design studies, for submission to the agency/institution for approval.

**Design Service Contingency** – Includes an allowance for uncertainty in scoping and pricing additional services, covers variability in estimating reimbursables, includes design fees for owner directed changes and includes design fees for changes during construction that are beyond the scope of basic services and are not a result of errors or omissions by the A/E. The total amount for design services contingency ranges from 5 to 10 percent of total consultant services cost depending on the complexity of the project.

**Designer** – A party to a contract to provide professional design services to an owner, often an architect or a professional engineer. Also, one (individual or corporate) who performs the design function in construction, as a package deal, a turnkey project, or a development management project.

**Discount Rate** – The discount rate reflects the time value of money. This should be approximate cost to the state for long-term debt (bonds).

**Economic Life** – Economic life in the context of cost/benefit analysis refers to the span of years necessary to compare similar costs of operating and maintaining alternative solutions. It may not equate to the time required to fully depreciate the structure. The economic life span should be the same for each alternative for a project. The period of time, extending from the date of installation to the date of retirement for the intended service, over which a prudent owner expects to retain the property in order to obtain a minimum cost.

**Energy Consumption Analysis** – Required for major facilities, an energy consumption analysis is prepared by a professional engineer or architect. It evaluates all energy systems and components by demand and type of energy including the internal energy load imposed on a major facility by its occupants, equipment, and components and the external energy load imposed on a major facility by the climatic conditions of its location.

**Energy LCCA Review** – As required by RCW 39.35, the Department of General Administration will review the Energy Conservation Report (LCCA) for a project. The fee for this review shall not exceed \$2,000.

**Energy Management System** – A system that identifies opportunities to improve energy efficiency including a measure that allows: (a) energy consumers to obtain information about their energy usage and the cost of energy in connection with their usage; (b) interactive communication between energy consumers and their energy suppliers; (c) energy consumers to

respond to energy price signals and to manage their purchase and use of energy; or (d) for other kinds of dynamic, demand side energy management.

**Equipment** – See Section 4 for equipment definitions and criteria.

**ESCO** – A firm that contracts with a facility owner or a utility to acquire, design, install, maintain and/or finance energy conservation, cogeneration or renewable energy projects. ESCO's primarily develop, own and operate energy projects with no technical or financial risk to the facility owner or utility. The ESCO can guarantee the energy savings, utility payments, and overall cost of the project.

**Facilities Improvements** – Initial construction, punch-list items, retrofits, alterations, remodeling, renewals, tenant improvements, renovations, adaptations and code improvements, etc., for a facility.

**Facility** – A structure with walls and a roof.

**Facility Preservation** – Improving or restoring the operational and service capacity to extend the useful life of a facility, without significantly affecting the programs and services housed within the facility.

**Fast Track** – A process in which certain portions of the A/E's design services overlap with construction activities in order to expedite the owner's early occupancy of all or a portion of the project.

**Fixed Assets** – A fixed, physically attached, and permanent improvement or real property. Fixed assets are normally those that are capitalized.

**Fixed Equipment** – The cost of objects not considered consumables (i.e., carpets, blinds, drapes, shop equipment, voice and data communications systems, chemical equipment, etc.) to be obtained through State Purchasing.

**Furniture, Fixture and Equipment (FF&E)** – The moveable furniture, fixtures, or equipment that require no permanent connection to utilities or to the structure.

**General Contractor** – The general contractor is a contractor whose business operations require the use of more than two unrelated building trades or crafts whose work the contractor shall superintend or do in whole or in part. A general contractor does not include an individual who does all work personally without employees or other specialty contractors as defined in this glossary. The terms general contractor and builder are synonymous.

**General Contractor/Construction Manager (GC/CM)** – A GC/CM is a firm with which an agency or institution has selected and negotiated a guaranteed maximum allowable construction cost for a project. A competitive selection process is used through formal advertisement and competitive bid to provide services during the design phase that may include life-cycle cost design considerations, value engineering, scheduling, cost estimating, constructability, alternative construction options for cost savings, and sequencing of work. The GC/CM acts as the construction manager and general contractor during the construction phase. The GC/CM process is subject to provisions in RCW 39.10.

**Geotechnical Investigation** – The cost to do soils boring, sampling, testing, and prepare recommendations. The soil boring and sampling process, together with associated laboratory tests, are necessary to establish subsurface profiles and the relative strengths, compressibility and

other characteristics of the various strata encountered within depths likely to have an influence on the design of the project.

**Governmental Purposes** – Any state or political subdivision that has been delegated substantial taxing, police, or condemnation power under state law.

**HVAC Balancing** – The cost to test and balance designed heating, ventilation, and air conditioning systems, including water flows, at the completion of construction.

**Improvement** – A legal term referring to anything erected on and affixed to land (e.g., buildings, roads, fences, and services), which legally becomes part of the land, according to common law and statutory definition.

**Initial Costs** – The same as “first cost” or the cost to provide the service or product in today’s dollars for a project. This is different from life cycle costs or future costs.

**Inspection (On Site)** – The examination of work completed or in progress to determine its conformance with the requirements of the contract documents.

**Instrumentality** – An agency through which a function of another entity is accomplished, such as a branch of a governing body.

**Intangible Benefits** – Benefits that cannot be easily measured and are generally subjective. Intangible benefits often represent the value of the service the agency provides to the public by either providing new services or improving existing services. See Tangible Benefits.

**Lease Development** – A lease development project is defined as an acquisition of space in an existing privately-owned building through a lease that provides for a period of occupancy greater than five years, with an option to purchase, or construction of a privately financed building for purposes of state occupancy. Lease-development projects represent long-term occupancy proposals, but are to be requested and funded from operating funds only.

**Lease/Purchase Obligations (Real Estate)** – Lease/purchase obligations are contracts entered into by the state which provide for the use and purchase of real or personal property, and provide for payment by the state over a term of more than one year. Lease/purchase obligations are one type of lease-development alternative. (See RCW chapter 39.94 "Financing Contracts" for more information.)

**LEED Silver Standard** – The United States green building council leadership in energy and environmental design green building rating standard, referred to as silver standard.

**Life-Cycle Cost** – The capital and operational cost of a construction item, system, or building during its estimated useful life.

**Life-Cycle Cost Analysis** – The identification of a total life-cycle cost of a capital project. Life-cycle cost analysis is defined as the programmatic and technical considerations of all cost elements associated with capital facility alternatives under consideration. These cost elements may include any or all of the following: capital investment costs, financial costs, operations costs, maintenance costs, alternations costs, replacement costs, denial of use costs, lost revenue, and associated costs. Life-cycle costing is expected to reduce the total cost by selecting the correct designs and components to minimize the total cost of service, not only the first cost. For instance, changes to the preliminary design might increase initial cost by lower operating costs and thereby reduce total costs.

**Long-Term Leases** – Those agreements that extend beyond five years (the normal facility lease period). Leases beyond a five-year term will be considered when: the agency has a stable and consistent program to be housed, there is demonstrated economic advantage to the extended term, and the space is used consistent with statewide utilization standards. (Contact the Department of General Administration, Division of State Services/Real Estate Services for more information.)

**Maintenance and Operations (M&O) Costs** – The costs of the regular custodial care and repair, annual maintenance contracts, utilities, maintenance contracts, and salaries of facility staff performing M&O tasks. The ordinary costs required for the upkeep of property and the restoration required when assets are repaired but not replaced. Items under M&O include the costs of inspecting and locating trouble areas, cleaning and preventive work, replacement of minor parts, power, labor, materials, and minor changes in or rearrangements of existing facilities. M&O work is required to preserve or restore buildings, grounds, utilities, and equipment to original conditions or such condition that they can be effectively used for their intended purpose.

**Maintenance and Operations Manuals** – The assembly, tabulation, and indexing of all shop drawings and submittals on all equipment, controls, and systems so that required maintenance and troubleshooting can easily be shown and understood. This is included in A/E Basic Services.

**Major Facility** – Any publicly owned or leased building having 25,000 square feet or more of usable floor space. Major facilities are required to conduct an energy consumption analysis of the operation of its energy systems.

**Major Projects** – Those projects that cost \$5 million or more, or projects that meet the following criteria: have particularly costly elements, are undertaken on a tight design budget or short design schedule, have significant policy implications to a program, or involve state-of-the-art technology.

**Management Reserve** – Management reserve is an allowance for changes beyond control of the owner and recognizes the potential for variances in key assumptions in building efficiency, escalation, sales tax, permit requirements/delays, and off-site development. The amount is a function of risk and uncertainty and may be non-existent for many projects, or range from 2 to 10 percent for others.

**Master Plan** – A document setting forth the concepts and guiding principles for future development of campus facilities, landscaping and infrastructure.

**Maximum Allowable Construction Cost (MACC)** – A cost that the owner stipulates to the design consultant before design begins. The cost is the owner's budget for the construction cost of the project and serves as the parameter in which the design consultant agrees that the construction cost of the design will not exceed.

**Midpoint of Construction** – The date midway between the commencement date and the date of substantial completion.

**Nongovernmental Purposes** – As used in the context of use of bond/COP proceeds to pay the costs of facilities expected to be owned or used by, or to make any loan or grant to, (a) the federal governmental purposes (including any federal department or agency), (b) any private nonprofit corporation (including any 501(c)(3) organization), and (c) any other private entity,

such as a business corporation, partnership, limited liability company, or association. (See definition for governmental purposes.)

**Normal Maintenance** – A systematic day-to-day process funded by the annual operating budget to control the deterioration of facilities, e.g., structures, systems, equipment, pavement, and grounds. Planned maintenance includes the following:

- Scheduled repetitive work, such as housekeeping activities, groundskeeping, site maintenance, and certain types of service contracts.
- Periodic scheduled work (preventive maintenance) that has been planned to provide adjustment, cleaning, minor repair, and routine inspection of equipment to reduce service interruptions

**On-Site Representative** – This is a full- or part-time employee who represents the owner during construction and serves as a liaison between the architect and contractor on major projects.

**Operations and Maintenance (O&M) Costs** – The costs of the regular custodial care and repair, annual maintenance contracts, utilities, maintenance contracts, and salaries of facility staff performing O&M tasks. The ordinary costs required for the upkeep of property and the restoration required when assets are damaged but not replaced. Items under O&M include the costs of inspecting and locating trouble areas, cleaning and preventive work, replacement of minor parts, power, labor, and materials. O&M work is required to preserve or restore buildings, grounds, utilities, and equipment to their intended running condition so that they can be effectively used for their intended purpose.

**Operations and Maintenance Manuals** – The assembly, tabulation, and indexing of all shop drawings and submittals on all equipment, controls, and systems so that required maintenance and troubleshooting can easily be shown and understood.

**Outline Specifications** – An abbreviated set of specification requirements normally included early in the design process.

**Owner** – The first party to the construction contract, who pays the contractor (the second party) for the construction work. The owner is the party who owns the rights to the land upon which the work is done and who, therefore, owns the work. He/she is the client of a designer, a construction manager, a project manager, or a development manager.

**Performance Bond** – A bond issued by a surety company on behalf of a contractor to guarantee an owner proper performance of the construction contract.

**Phased Construction** – Construction in which design and production more or less overlap, thus shortening project time; usually practiced in construction management projects. See Fast Track.

**Predictive Maintenance** – A refinement to preventive maintenance that integrates scheduled maintenance with system monitoring and analysis (e.g. vibration analysis, thermal/energy analysis) to identify inefficient operation or imminent breakdown. Predictive maintenance ideally reduces the cost of maintaining components that are working adequately.

**Present Worth or Present Value** – The economic procedure to account for the time-equivalent value of past, present, or future costs at the beginning of a base period.

**Preservation Project** – Projects that maintain and preserve existing state facilities and assets, and do not significantly change the program use of a facility. Examples would include roof



replacement and exterior renovation, utility system upgrade, and repairing streets and parking lots.

**Preventive Maintenance** – A maintenance strategy where inspections are made or actions are taken on a scheduled basis to reduce service interruptions, reduce the premature failure of facilities, systems, and equipment, and continue efficient operations. Actual inspection and maintenance is performed on pre-specified schedules established by manufacturer or facility manager.

**Primary Purpose** – As used in defining a project type, the identification of the dominant driver behind the project; it is the area where the impact of not correcting the deficiency is most acute.

**Program Projects** – Projects that are intended to accomplish a program goal such as changing or improving the use of existing space, or creating a new facility or asset through construction or purchase. These projects may have a major impact on future operating budgets – such as the construction of a new prison or university branch campus.

**Programming** – The work necessary to define the scope of a project, conduct master planning for future work, or delineate the existing conditions. This work may require field measurements or building systems testing and surveys.

**Project Budget** – The sum established by the agency/institution as available for the entire project, including the construction budget, acquisition costs, costs of furniture, furnishings and equipment, and compensation for professional services and all contingencies.

**Project Delivery System** – Method of how an owner plans to contract a project, i.e., design/bid/build, design/build, GC/CM, etc.

**Real Property** – Property that is fixed, immovable, and permanent. Real property includes land, structures affixed to the land, property affixed to the structures, and in some cases, trees etc., growing on the land.

**Reappropriation** – Unspent funds from the prior biennium approved by the Legislature and reallocated to the agency by OFM during the current biennium.

**Record Drawings** – The revised drawings that truly reflect what was constructed including field verification.

**Reimbursable Expenses** – Amounts expended for or on account of the project that, in accordance with the terms of the appropriate agreement, are to be reimbursed by the agency/institution such as telephone charges and travel expenses in accordance with state guidelines.

**Retainage** – Those portions of cash amounts due to be paid to a contractor for work completed that are held back (retained) by the agency/institution and not paid until some later date; often at substantial completion or at final completion of the work, according to the terms and conditions of the contract and any relevant legal statute; as a security for proper performance of work and fulfillment of contractor's requirements.

**Schedule of Values** – A schedule breakdown on a month-to-month basis by the contractor to show the intended percentage of completed work by the construction trades. The schedule of values is the basis for the amount of the request for payment by the contractor.

**Schematic Design Phase** – The phase of the A/E's services in which the architect consults with the agency/institution to ascertain the requirements of the project and prepares schematic design studies consisting of drawings and other documents illustrating the scale and relationships of the project components for approval by the agency/institution. The A/E also submits a preliminary estimate of construction cost based on current area, volume, or other unit costs.

**Site Survey** – The process of mapping the boundary, topographic, or utility features of a site, measuring an existing building, or analyzing a building for use of space.

**Specifications** – The major part of a project manual (excluding the documented bidding, contract agreement, and the conditions of the contract) discussing the written descriptions of items of work that complement the construction drawings.

**Subcontractor** – A party to a subcontract who does trade work for a contractor (the other party), for work included under the prime contract between the same contractor and an owner; one who is defined as a subcontractor by the prime contract.

**Substantial Completion** – The stage of a project when progress of the work is sufficiently complete so the owner can occupy or utilize the work site for its intended purpose.

**Testing** – This is a technician's services in acquiring and testing samples of materials used in the project as required in the State Building Code such as welds, concrete strength, or bearing capacity.

**Unifomat** – A system for classifying building products and systems by functional subsystem, e.g., substructure, superstructure, exterior closure.

**Useful Life** – An estimate of the total time that an asset is usable and in service.

**Value Engineering (VE)** – VE is a systematic, orderly approach to defining a facility's required function, verifying the need for the function, and creating alternatives for providing the function at minimum life-cycle cost. Value is the lowest life-cycle cost to achieve the required function. VE is a problem-solving system that emphasizes the reduction of cost while maintaining the required quality and performance of the facility. Applied in addition to the regular design process, it is required on all major projects.

**V/E Participation and Implementation** – The extra fee to be paid to the A/E for participation in the required value engineering study and includes incremental costs to implement those changes identified by the study and requested by the owner.